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Nutritional Benefit and Antioxidant Activity of Wild Edible Fruit Plants in Odisha

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Abstract

Now days a proper diet is very much required for everybody. Due to lack of nutrition, many people suffer from malnutrition and severe diseases. In Odisha, there are varieties of wild edible fruits species are found in many of the forests. These fruits can serve as functional foods due to presence of essential vitamins, minerals and fibres which can provide necessary dietary supplements and therapeutic usage in the modern era. Mostly tribal's, forest dwellers and rural people of Odisha have a treasure of information's based on the natural bio-resources as a nutritional source for its population and depends on forest for their annual food requirements. Wild edible fruits contain a wide range of secondary metabolites & free radical scavenging molecules, the harmful action of the free radicals can be blocked by antioxidants which scavenge the free radicals and detoxify the organism. The present review highlights the nutritional benefits & antioxidant activity of wild edible fruit plants in Odisha.

Keywords: Wild edible plants, Antioxidant, Malnutrition, Sickness

Introduction

The State of Odisha, due to its varied agro climatic conditions, is enriched with green plants and trees bearing wild edible eaten fruits. These wild fruits are used mostly by local residents, especially tribal's. They have a wide range of colour, taste, flavour, and ripening season and contain antioxidant, such as polyphenols, phenols, flavonoids, steroids and dietary glutathione. They are a good source of neutraceuticals needed for a healthy diet and may give to the prevention and treatment of sicknesses. Nutrition is a fundamental biological process for self-existence of living organisms. Food and nutritional security are key concerns the world over as low food intake and poor access to food in underdeveloped countries results in malnutrition and health hazards (Padmashree et al., 2014).

Besides, providing nutritional benefits attachment, these wild fruits also can serve as natural or synthetic antioxidants like butylated hydroxyl anisole, butylated hydroxyl toluene, butylated hydroquinone and Gallic acid esters show low ability to be dissolved in something and not extreme body-protecting chemical activity. Because of this, now research has now been focused on being completely separate from others and description of natural antioxidants from plants. Mainly there are two types of Natural antioxidants i.e. enzymatic and non-enzymatic. Enzymatic antioxidants include catalase, superoxide dismutase, peroxidise , glutathione peroxidase, glutathione reductase, glucose-6-phosphate dehydrogenase and ascorbate oxidase etc. while non-enzymatic includes Tocopherol, Ascorbic acid, carotenoids, flavonoids and related polyphenols, lipoic acid, glutathione etc. which all together work in cooperation very well together to oppose go against balance oxidative stress. Natural antioxidants are known to protect cells from damage induced by oxidative stress, which is generally considered as being a cause of aging, degenerative diseases, and cancer (Kim et al., 2011). Reports noted that medicinal plants are an important source of antioxidants. Natural antioxidants increase the antioxidant capacity of the plasma and reduce the risk of certain diseases such as cancer, heart diseases, and stroke. Fruits are carefully thought about to be rich in antioxidants but the total antioxidants is yet to be uncovered and shown off in an organized way in case of wild edible eaten fruits .However, the consumption of fruits with a high antioxidant composition has been connected with a lowered of long-lasting, sicknesses including cancer, heart-related heart disease, swelling, painful joint swelling, disease-fighting system decline, brain harmful, angry behaviour, eye diseases that ruin vision, attitude sickness, digestive, stomachic difficulties, different related to the body function of living things activities like lipid-lowering effect.

The secondary metabolites like phenolic and flavonoids have been reported to be potent free radical scavengers. These secondary metabolites are found in all parts of plants such as leaves, fruits, seeds, roots and bark (Mathew S & Abraham, 2006). Secondary metabolites may be referred to as chemical substances that are not directly involved in the growth and development of plants. Such metabolites are known to participate in plant defense mechanisms. These fruit plant also providing more protection against cancer, and dangerous blood vessel disease. Even though wild food plants represent a minor to family meals, they are possibly important something that acts as food and cultural useful valuable supplies for local people around the world.

Conclusion

The present review provides a current relevance to human health and tries to explore wild edible plants (WEPs) as a source of extremely important things that act as foods and secondary metabolites that separates and labels it as a functional food. The presence of secondary metabolites with different properties also figures out the medicinal value of WEPs as useful sources of drugs. The antioxidant on WEPs are therefore an extremely important tool to further clear up the possible health effects of phytochemical antioxidant in the diet. From this review, it can be decided that WEPs are used as antioxidants, neutraceuticals or as medicines by the people in Odisha and in other places in the world.

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